

AMSAT News Service Weekly Bulletins

Issue: ANS-172

Date: 1992-06-20

Sources: amsat-ans-1992-ans-172-weekly.txt

SB SAT @ AMSAT \$ANS-172.01

CALL FOR PAPERS

HR AMSAT NEWS SERVICE BULLETIN 172.01 FROM AMSAT HQ
SILVER SPRING, MD JUNE 20, 1992 BID:\$ANS-172.01
TO ALL RADIO AMATEURS BT

1992 AMSAT-NA Space Symposium Call For Papers

Papers are being solicited for the 1992 AMSAT-NA Space Symposium to be held in Washington, D.C. on October 9-11 at INTELSAT Headquarters. If are interested in presenting a paper at the Symposium, please contact AMSAT-NA Headquarters or Steve Todd (K2IYQ) at the INTERNET or CompuServe address listed below. Final manuscripts are due by July 30 in the AMSAT-NA office.

To assist authors, papers may be submitted via CompuServe, or INTERNET as ASCII files. Papers may also be submitted in CAMERA READY form. These papers are required to have minimum 1 inch borders on ALL sides. Illustrations may be hand drawn or machine drawn with the same 1 inch border requirements. By prearrangement, K2IYQ can accept papers via 2400 baud telephone modem (E-7-1) with up to MNP-5 data compression. AMSAT Headquarters may also accept FAX, if necessary.

Please contact AMSAT-NA Headquarters or respond to k2iyq@amsat.org to indicate your interest.

AMSAT-NA
850 Sligo Ave., Suite 600
Silver Spring, MD 20910
Voice: (301) 589-6062
FAX: (301) 608-3410

Steve Todd, K2IYQ
CompuServe: 73060,1636
INTERNET: k2iyq@amsat.org
Voice: (301) 253-4172
Data/FAX: (301) 990-7147 (Prearrange)

/EX

SB SAT @ AMSAT \$ANS-172.02
MORE STS-50/SAREX INFORMATION

HR AMSAT NEWS SERVICE BULLETIN 172.02 FROM AMSAT HQ
SILVER SPRING, MD JUNE 20, 1992 BID:\$ANS-172.02
TO ALL RADIO AMATEURS BT

STS-50 Shuttle Amateur Radio Experiment (SAREX) From NASA Press Kit

The Shuttle Amateur Radio Experiment (SAREX) is designed to demonstrate the feasibility of amateur shortwave radio contacts between the Space Shuttle and ground amateur radio operators. SAREX also serves as an educational opportunity for schools around the world to learn about space firsthand by speaking directly to astronauts aboard the Shuttle via ham radio. Contacts with certain schools are included in planning the mission.

Ham operators may communicate with the Shuttle using VHF FM voice transmissions, slow scan television and digital packet. Several selected ground stations also will be able to send standard television to the crew via SAREX. The television uplink will be used to send video of the crew's families and of the launch.

The primary voice frequencies to be used during STS-50 are 145.55 MHz for transmissions from the spacecraft to the ground and 144.95 MHz for transmissions from the ground to the spacecraft. Digital packet and slow

scan television (SSTV) will operate on the same frequencies, while the fast scan television (FSTV) uplink will be limited to the UHF ham band at 450 MHz.

Equipment aboard Columbia will include a low-power, hand-held FM transceiver, spare batteries, headset, an antenna custom designed by NASA to fit in an orbiter window, interface module and an equipment cabinet.

SAREX has flown previously on Shuttle missions STS-9, STS-51F, STS-35, STS-37 and STS-45. SAREX is a joint effort by NASA, the American Radio Relay League (ARRL), the Amateur Radio Satellite Corp. (AMSAT) and the Johnson Space Center Amateur Radio Club. Information about orbital elements, contact times, frequencies and crew operating times will be available from these groups during the mission and from amateur radio clubs at other NASA centers.

Ham operators from the JSC club will be operating on HF frequencies and the ARRL (W1AW) will include SAREX information in its regular HF voice and teletype bulletins. The Goddard Space Flight Center Amateur Radio Club (GARC) in Greenbelt, Md., will operate 24 hours a day during the mission, providing information on SAREX and retransmitting live Shuttle air-to-ground communications. In addition, the NASA Public Affairs Office at the Johnson Space Center will have a SAREX information desk during the mission.

STS-50 SAREX Operating Frequencies

Location Reception	Shuttle Transmission	Shuttle
U.S., Africa	145.55 MHz	144.97 MHz
South America	145.55	144.95
and Asia	145.55	144.91
Europe	145.55 MHz	144.80 MHz
	145.55	144.75
	145.55	144.70

Goddard Amateur Radio Club Operations (WA3NAN SAREX Information and Shuttle Audio Broadcasts)

3.860 MHz	7.185 MHz
14.295 MHz	21.395 MHz
28.650 MHz	147.450 MHz (DC/Baltimore)

SAREX information also may be obtained from the Johnson Space Center computer bulletin board (JSC BBS), 8-N-1 1200 baud, at (713) 483-2500 and then type 62511.

[Excerpted from the NASA STS-50/SAREX Press Kit]

/EX

SB SAT @ AMSAT \$ANS-172.03
NTRN TO FEATURE '2001' AUTHOR

HR AMSAT NEWS SERVICE BULLETIN 172.03 FROM AMSAT HQ
SILVER SPRING, MD JUNE 20, 1992 BID:\$ANS-172.03
TO ALL RADIO AMATEURS BT

SATELLITE NTRN TO FEATURE ARTHUR C. CLARKE
By Bill Pasternak, WA6ITF
Amateur Radio Newsline

Arthur C. Clarke, AMSAT member #2001, and the man whose imaginative mind conceived communications satellites decades before the first such machine

was built and placed into orbit will be a special guest on an upcoming National Teleconference Radio Net (NTRN) scheduled for 6-8 PM Eastern Daylight Time on July 12. AMSAT-NA's Director of Development Joe Schroeder, W9JUV, has announced that the futurist and writer has accepted an invitation to appear with other AMSAT notables on this 'town meeting of the air' of 1992 that is being devoted to space relay communications.

The July NTRN will be a plain language discussion of communications satellites in general and the planned AMSAT Phase-3D in particular. Technical talk will be kept to a minimum, with emphasis placed on the utilization of these birds by the amateur community worldwide in a wide variety of situations including emergency communications, education, information dissemination and just plain rag chewing.

Other guests expected to be on-line include Schroeder, former Astronaut Tony England (W00RE), AMSAT-NA President Bill Tynan (W3X0), Executive V.P. Ray Soifir W2RS, Phase-3D Project Manager Dick Daniels (W4PUJ) and Education Director Rich Ensign (N8IWJ). Former NBC Network News science editor, correspondent and producer Roy Neal (K6DUE) will moderate the program. Both Clarke and net participant Astronaut and Antarctic explorer Tony England (W00RE) are appearing on the invitation of K6DUE. Pre-net audio again supplied by Steve Bauer (KC0HF).

By way of background, Arthur C. Clarke was born in Minehead, England in 1917. He is probably best known as the author of the time-travel science fiction novel '2001 - A Space Odyssey' which in turn was based on an earlier Clarke short story titled 'The Sentinel.' '2001' was later made into a motion picture by Director Stanley Kubrick, and was the first of a trilogy of Clarke works that includes '2010 - Odyssey Two' and '2061 - The Year We Made Contact.' Other books by Clarke include 'Earthlight', 'Rendezvous With Rama', 'Imperial Earth', 'The Fountains of Paradise, and 'The Songs of Distant Earth', and many others.

Arthur C. Clarke has also been honored by the science community by having the Clarke Belt named after him. The Clarke Belt, is the "Parking Orbit" for geostationary earth satellites located about 22,000 miles above the Equator.

In one of his early works, Clarke laid out the basic tenants that needed to be included in space relay communications, and went on to illustrate the way in which such man made satellites could serve the communications needs of its creator.

Clarke, who now lives in Sri Lanka, accepted the invitation to take part in the NTRN after a brief telephone conversation with Schroeder on Thursday, June 4th. According to Schroeder, he was attempting to FAX the letter of invitation to Clarke when the phone was answered by voice. Joe explained the reason for the call and in seconds Arthur C. Clarke was on-line and accepted the AMSAT-NA invitation. He also told W9JUV that he could not stay on the telephone very long, because a monsoon with gale force winds was raging outside and this particular phone line was his only connection to the outside world!

During the NTRN, Clarke is expected to explain how he first thought up the idea of communications satellites.

Another famous guest will be Dr. Anthony England (W00RE). Tony attained great notoriety as the first radio amateur to operate on-orbit, and the first to successfully operate two-way amateur slow-scan television (SSTV) transmissions from a space shuttle. His 1985 flight aboard the shuttle Challenger proved the viability of two-way spaceborne SSTV as a method of transferring mass quantities of data to and from an orbiting shuttle, and led to further official experimentation in this mode by NASA and radio amateurs allied to the space transportation shuttle system. England's STS-51F flight was also where the term

"SAREX" which stands for Shuttle Amateur Radio Experiment came into being. Tony left the shuttle program several years ago to become a Professor at the University of Michigan at Ann Arbor, but remains active in Amateur Radio and scientific projects allied to the service.

A major topic to be discussed during the two hour session will be the new Phase-3D Amateur Radio satellite, currently in its final design stage by AMSAT groups worldwide. Phase-3D has been dubbed "the first ham satellite for the average amateur" and is a very ambitious and costly project for AMSAT. Phase-3D will cost a bit over five million dollars to construct and launch, with hams in North America expected to donate at least \$1.5M of that amount before the anticipated 1995 orbiting of the new bird. Once in orbit, Phase-3D will use its highly directional high-gain antennas and multiple transponder array to provide almost unprecedented high-quality space relay communications for the world's radio amateurs. Exactly how this will be accomplished will be explained during the NTRN session.

As in the past, the Darome Connection Inc. will be making available its Minneapolis based multi-port interactive teleconference bridge, and John Desmond K0TG, will be on-site to oversee its operation.

The Teleconference itself will originate from numerous cities around the country and will include taped reports by key AMSAT Phase-3D personnel in various countries involved in the satellite project. The interactive nature of the teleconference bridge network permits listeners to become active participants by asking questions of the panelists and receiving answers in real time.

In addition to the 200 interactive ports on the Darome Connection teleconference bridge, AMSAT-NA is also joining forces with the 'Lets Talk Radio Network.' The 'Lets Talk Radio Network' has been purchased by a consortium of hams headed by Blair Alpert (KA9SEQ) and Frank Collins (N6TAF) and will be carrying the entire NTRN as a one-way non-interactive program for those repeaters who wish to listen only and not interact with the guests. The NTRN will be heard over the regular Lets Talk Radio transponder 21 (6.2 MHz Wideband Audio) on the GTE Spacenet III communications satellite.

The Amateur Radio Newsline Inc. of Los Angeles California is overall producer of the NTRN for AMSAT-NA and will be providing both technical and creative services for the event. Bill Pasternak (WA6ITF) is serving as Executive Producer and Director.

Due to the limited number of interactive ports on the teleconference bridge, these will only be made available to repeater groups wishing to actively participate in a two-way exchange with the guest panelists and will be assigned on a first-come, first serve basis. To reserve a teleconference bridge interactive port, please send a self addressed postal card and a letter of request that gives the repeater callsign, its location, name address, callsign and telephone number of its trustee/licensee and its estimated user base (number of users likely to take part in the NTRN) to the 1992 Satellite NTRN, % Newsline Radio, 28197 Robin Avenue, Saugus CA 91350. Alternately, port assignments may be requested by MCI Electronic Mail sent to the 'NEWSLINE' mailbox on that service. The cut off date for reservations is June 30, 1992. (Note: No reservations can be accepted on any other E-Mail service, and requests by mail that are not accompanied by a self addressed stamped postal card will not be answered. No requests will be accepted or assignments made by telephone.)

[Prepared for the WESTLINK REPORT, June 1992. Copyright material. May be reproduced in part or in whole with proper source credit given.]

/EX
SB SAT @ AMSAT \$ANS-172.04

NOMINATIONS FOR AMSAT-NA BOD CLOSE

HR AMSAT NEWS SERVICE BULLETIN 172.04 FROM AMSAT HQ
SILVER SPRING, MD JUNE 20, 1992 BID:\$ANS-172.04
TO ALL RADIO AMATEURS BT

Candidates For The AMSAT-NA Board-of-Directors (BOD)

The following AMSAT-NA members have been nominated to run for the three seats which will expire this November '92 on the AMSAT-NA BOD. The following names will appear on the ballot:

Joe Kasser	(W3/G3ZCZ)
Tom Clark	(W3IWI)
Eric Rosenberg	(WD3Q)
Dick Daniels	(W4PUJ)
Mike Crisler	(N4IFD)
Joe Holman	(KA7LDN)
Bob Diersing	(N5AHD)
Andy McAllister	(WA5ZIB)

Each elected board member serves a two year term. Look for your ballot to be included in an upcoming issue of the AMSAT Journal.

/EX

SB SAT @ AMSAT \$ANS-172.05
A0-21/RUDAK-II FREQUENCIES

HR AMSAT NEWS SERVICE BULLETIN 172.05 FROM AMSAT HQ
SILVER SPRING, MD JUNE 20, 1992 \$ANS-172.05
TO ALL RADIO AMATEURS BT

A0-21/RUDAK-II Frequencies

Downlink: 145.983 (1200 baud PSK)
Uplink 1: 435.016 (1200 baud FSK)
Uplink 2: 435.155 (2400 baud PSK)
Uplink 3: 435.193 (4800/9600 baud RSM)
Uplink 4: 435.041 (DSP multi mode)

Uplinks 3 & 4 are currently not in use. On Uplink 1 you can use the usual JAS 1200 baud configuration. Uplink 2 requires a special PSK modem and a TNC configured for split RX/TX bitrate (1200 baud up and 2400 baud down). The downlink might also transmit the 400 baud A0-13 block format during maintenance procedures. To read this data you need a 400 baud PSK demodulator (e.g., G3RUH 400 baud PSK modem).

[The AMSAT News Service (ANS) would like to thank DL2MDL for this bulletin item.]

/EX

SB SAT @ AMSAT \$ANS-172.06
F0-20 STATUS

HR AMSAT NEWS SERVICE BULLETIN 172.06 FROM AMSAT HQ
SILVER SPRING, MD JUNE 20, 1992 BID:\$ANS-172.06
TO ALL RADIO AMATEURS BT

F0-20 Software Upload And Operation Schedule

A software reload was completed on 16-Jun-92 at 04:55 UTC by F0-20 spacecraft controllers.

The F0-20 operation schedule is as follows:

June 16th to 23rd: Fast Telemetry Transmission
Mailbox is closed
Digital repeater available

June 23rd : Mailbox will be re-activated

Mode JA analog transponder operation is expected to occur according to the following schedule:

24-Jun-92 01:50 UTC -to- 25-Jun-92 02:10 UTC
27-Jun-92 02:50 UTC -to- 29-Jun-92 01:35 UTC

[The AMSAT News Service (ANS) would like to thank Kazu Sakamoto (JJ1WTK) and Space News Editor (KD2BD) for the information in this bulletin.]

/EX
SB SAT @ AMSAT \$ANS-172.07
A0-13 OPERATIONS NET SCHEDULE

HR AMSAT NEWS SERVICE BULLETIN 172.07 FROM AMSAT HQ
SILVER SPRING, MD JUNE 20, 1992 BID:\$ANS-172.07
TO ALL RADIO AMATEURS BT

AMSAT-NA Operations Net Schedule

AMSAT Operations Nets are planned for the following times. Mode B Nets are conducted on A0-13 on a downlink frequency of 145.950 MHz and Mode J/L on a downlink of 435.970 MHz.

Date	UTC	Mode	Phs	NCS	Alt
5-Jul-92	02:00	B	118	W90DI	N7NQM
11-Jul-92	23:00	B	225	W5IU	WA5ZIB
19-Jul-92	00:00	B	164	WJ9F	WA5ZIB
1-Aug-92	20:00	B	168	VE2LVC	W90DI

Guest commentators are planned. Join the Net if you have questions. In the unlikely event that either the NCS or the alternate do not call on frequency, any participant is invited to act as the Net Control Station.

Slow Scan Television on A0-13

The SSTV Net will meet on a downlink frequency of 145.925 MHz, Mode B at MA 165, UTC Sundays. Also try Mode J, UTC Saturdays at MA 165, on a downlink frequency of 435.980 MHz. Try the various AMSAT Nets for scheduling at other times.

/EX
SB SAT @ AMSAT \$ANS-172.08
SUMMER A0-13 TRANSPONDER SCHED

HR AMSAT NEWS SERVICE BULLETIN 172.08 FROM AMSAT HQ
SILVER SPRING, MD JUNE 20, 1992 BID:\$ANS-172.08
TO ALL RADIO AMATEURS BT

A0-13 Late Summer Schedule Announced

The current schedule for A0-13 is as follows:

N QST 1992 May 08 A0-13 Transponder Schedule Jun 10 - Jul 20

Mode-B : MA 000 to MA 165 ! Mode-JL on Mon, Wed !
 Mode-JL : MA 165 to MA 200 ! Fri and Sat UTC only. ! Alon/Alat
 Mode-LS : MA 200 to MA 215 ! S Beacon on "L" days ! 210/1
 Mode-B : MA 215 to MA 256 ! S Transp on "B" days +-----/
 Omnis : MA 250 to MA 060 ! Mode L OFF after Jun 29 until
 Aug 17. Next attitude change Jul 20, to 150/0 until Sep 21.
 73 de Peter DB20S, James G3RUH and Graham VK5AGR.

A0-13 Transponder Schedule 1992 Aug 17 - Sep 21

 Mode-B : MA 0 to MA 40 ! from 1992 Aug 17 until Sep 21
 Mode-S : MA 40 to MA 50 !<- S transponder; B trsp. is OFF!
 Mode-LS : MA 50 to MA 55 !<- S beacon + L transponder
 Mode-JL : MA 55 to MA 70 ! This schedule operates
 Mode-B : MA 70 to MA 256 ! every orbit, every day.
 Omnis : MA 160 to MA 10 ! Alon/Alat 150/0
 Please DON'T uplink to mode-B MA 40-50; interferes with mode S.

Calendar of events for Oscar-13 to the end of 1992

Date	Event	Modes	Sun Angle	Suns Position SEL/SAZ
1992 Jun 29 [Mon]	JLS OFF	B -- -	24	-33/149
1992 Jul 20 [Mon]	Move to 150/0	B -- -	43 to 44	-34/176
1992 Aug 17 [Mon]	JLS ON	B JL S	28	-26/208
1992 Sep 21 [Mon]	Move to 180/0	B JL S	-1 to 29	-2/241
1992 Nov 23 [Mon]	Move to 210/0	B JL S	-29 to -4	33/305
1992 Dec 14 [Mon]	JLS OFF	B -- -	-27	33/333
1992 Dec 28 [Mon]	t.b.a.		43	29/351

A0-10 is currently available for Mode B operation when it is view of your QTH. PLEASE DO NOT attempt to use A0-10 if you hear the beacon or the transponder signals FMing.

/EX

SB SAT @ AMSAT \$ANS-172.09

A0-16 EXPERIMENTER'S DAY

HR AMSAT NEWS SERVICE BULLETIN 172.09 FROM AMSAT HQ
 SILVER SPRING, MD JUNE 20, 1992 BID:\$ANS-172.09
 TO ALL RADIO AMATEURS BT

A0-16 Experimenter's Day Resumes In September.

The A0-16 Command Team has announced that the weekly Wednesday Experimenter's Day activities will take a summer break. Routine Experimenter's Day operations will be suspended for June, July, and August. However, the A0-16 Command Team urges all users to continue QRP Day operations each Wednesday by limiting their uplink power to 20-25 watts EIRP.

Experimenter's Day activities will resume in September.

/EX

SB SAT @ AMSAT \$ANS-172.10

1992 AMSAT FD COMPETITION

HR AMSAT NEWS SERVICE BULLETIN 172.10 FROM AMSAT HQ
 SILVER SPRING, MD JUNE 20, 1992 BID:\$ANS-172.10
 TO ALL RADIO AMATEURS BT

1992 AMSAT Field Day Competition Announcement

Believe it or not, Field Day is once again just around the corner on June 27th, and we are proud to announce the 1992 AMSAT Field Day competition. This year, we have implemented some special rules for the AMSAT competition to encourage the use of all amateur satellites, including the digital satellites. Here are the rules for the 1992 AMSAT Field Day competition.

1. ANALOG TRANSPONDERS

Each satellite is considered a separate band. All phone QSOs and all CW QSOs on a given satellite are considered separate bands. All packet/RTTY /ASCII/AMTOR QSOs are counted as CW QSOs. Phone QSOs count for one point and CW QSOs count for two points. Cross-mode contacts are not allowed. The use of more than one transmitter at the same time in a single band is prohibited.

2. DIGITAL TRANSPONDERS

Each satellite is considered a separate band. The following uploads/downloads each count as a CW contact (two points): (a) Download of the AMSAT Field Day file from the broadcast rotation on the MicroSats, (b) Upload of the Satellite Field Day Greetings file, and (c) Download of Satellite Field Day Greetings files. Satellite digipeat QSOs do not count for any score. The use of gateway stations to uplink/downlink is not allowed.

SAMPLE SATELLITE FIELD DAY GREETINGS FILE:

"Greetings from W8XYZ Field Day Satellite station in Egypt, OH with 28 participating members. Good luck & 73s."

3. OPERATING CLASS

Stations supplied only with emergency power are in a separate operating class from those that utilize commercial power.

Work is currently in progress to get the AMSAT Field Day file uploaded and included in the broadcast rotation of the MicroSats or in the text frame of the digital-capable satellites. A Satellite Summary Sheet may be found in the March/April issue of The AMSAT Journal on page 27. Please submit your AMSAT Field Day competition results to AMSAT headquarters, 850 Sligo Avenue, Silver Spring, MD 20910-4703 by August 28, 1992.

Competition was tough in 1991 and should be even tougher in 1992. We hope this competition provides satellite operators with the practice necessary to be able to set up a ground station and effectively operate the satellites in an emergency situation. Remember that Field Day also provides a good opportunity to give some newcomers a chance at operating the satellites. Most of all, it should be a lot of fun for all who participate.

GOOD LUCK ON FD

/EX